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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/771,273	01/26/2001	Akihiro Shimotsu	A0-234 US	7981

23683 7590 04/16/2003

MOLEX INCORPORATED  
2222 WELLINGTON COURT  
LISLE, IL 60532

EXAMINER

DOAN, JENNIFER

ART UNIT PAPER NUMBER

2874

DATE MAILED: 04/16/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b>	<b>Applicant(s)</b>	
	09/771,273	SHIMOTSU, AKIHIRO	
	<b>Examiner</b>	<b>Art Unit</b>	
	Jennifer Doan	2874	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 30 January 2003.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-19 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1,2,6,7 and 10-19 is/are rejected.
- 7) ☒ Claim(s) 3-5,8 and 9 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.  
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

**Priority under 35 U.S.C. §§ 119 and 120**

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All   b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)                  | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s). _____  |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)         | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ | 6) <input type="checkbox"/> Other:  |

## DETAILED ACTION

### *Priority*

1. Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

### *Specification*

2. Applicant's cooperation is requested in correcting any errors of which applicant may become aware in the specification.

### *Claim Rejections - 35 USC § 103*

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 1, 2, 6, 7 and 10-19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Szostak (U.S. Patent 4,815,809).

Szostak discloses (Fig. 2) a method and an apparatus of a ferrule for an optical fiber connector comprising a capillary (30) having a pair of opposing ends, an outer surface extending between the opposing ends (Fig. 2); a hole extending between the

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opposing ends for insertion of an optical fiber (10) strand therein and a flange molded as a separate component from the capillary onto the capillary outer surface (Fig. 2, column 4, lines 1-29); wherein the flange is molded from a plastic material (column 3, lines 51-52) and the flange has a cylindrical outer surface comprising a large diameter portion and a small diameter portion as shown in Fig. 6; wherein the capillary is provided of one material and the flange is molded of a different material and the capillary is provided of a hard material and the flange is molded of a softer plastic material (column 2, lines 64-65 and column 3, lines 50-52) and further the flange is molded of a material including resins such as PBT containing glass fiber, polyetherimide and a liquid crystal polymer containing glass fiber (column 3, lines 50-54).

Szostak does not explicitly disclose a flange molded onto intermediate the capillary opposing ends such that the capillary outer surface proximate each opposing end is not covered by the molded flange as recited in claims 1 and 7. However, the flange molded onto intermediate the capillary opposing ends is considered to be obvious, since Fig. 2 of Szostak shows the capillary is supported in a mold fixture and the plastic ferrule body is injection molded around the capillary; therefore, the other end of the capillary has to be supported in a molded flange and ferrule body as the shown end of the capillary. Thus, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the Szostak's device with a flange molded onto intermediate the capillary opposing ends for obtaining more protection.

Szostak discloses the claimed invention except for the capillary provided of a material such as zirconia as recited in claims 12, 14, 17 and 19. However, it would have

been obvious to one having ordinary skill in the art at the time the invention was made to employ zirconia to make the capillary, since it has been held to be within the general skill of a worker in the art to select a known material on the basis of its suitability for the intended use as a matter of obvious design choice. *In re Leshin*, 125 USPQ 416.

#### ***Allowable Subject Matter***

5. Claims 3-5, 8 and 9 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

The prior art fails to disclose or reasonably suggest an apparatus and a method of making a ferrule comprising a recess and projection portions being formed at an interface between the capillary outer surface and the flange as recited in claims 3 and 8; further wherein forming a projecting portion in the capillary outer surface and filling a space surrounding the projecting portion with a molding material during molding as recited in claim 9.

Claims 4 and 5 are dependent on the objected claim 3.

#### ***Response to Arguments***

6. Applicant's arguments, see pages 3-4, filed 01/30/2003, with respect to the rejection of claims 1-9 under Kurokawa et al. have been fully considered and are persuasive. The examiner agrees with the applicant that Kurokawa et al. do not teach a ferrule includes a capillary having a separate flange molded thereabout to mount the

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capillary in an optical fiber connector. Therefore, the rejection has been withdrawn. In view of further search, however, and the consequent discovery of relevant prior art documents to explicitly show this feature, a new rejection is applied. This action is made final.

### ***Conclusion***

7. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

8. Any inquiry concerning the merits of this communication should be directed to Examiner Jennifer Doan whose telephone number is (703) 308-6179. The examiner can normally be reached on Monday to Thursday from 6:30am to 4:00pm, first Friday off.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Rodney Bovernick, can be reached on (703) 308-4819. The fax phone number for the organization where this application or proceeding is assigned is (703) 308-7724.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0956.

JD

JD

April 09, 2003

  
AKM ENAYET ULLAH  
PRIMARY EXAMINER